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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application:

ABDUL MALIK

Serial No.: 10/001,489

Group Art Unit:

Filed: 10/23/01

Examiner:

For: SAMPLE PRECONCENTRATION TUBES WITH SOL-GEL SURFACE  
COATINGS AND/OR SOL-GEL MONOLITHIC BEDS

Attorney Docket Number: 0152.00420

**PRELIMINARY AMENDMENT**

Box Missing Parts  
Assistant Commissioner for Patents  
Washington, D.C. 20231

Dear Sir:

Please amend the above-identified application prior to consideration of the  
application on the merits.

2002 APR 03 11:00 AM

**IN THE SPECIFICATION:**

Page 19, Lines 16-25:

Figures 3-6 illustrate the performance of microextraction capillaries with surface-bonded sol-gel coatings. The extraction conditions for the capillaries involve the use of a sol-gel PDMS coated capillary (35 mm by 250 micrometers I.D.) The extraction took a total of 30 minutes. The capillary was placed inside a GC injector port and connected with a GC column, which was a sol-gel PDMS column (10 meters by 250 micrometers I.D.) at 30°C for 5 minutes and then it remained at 6°C per minute thereafter. As can be seen from these figures, sol-gel coated microextraction capillaries can extract both polar and non-polar analytes from aqueous environment. Moreover, these coatings can extract the both types of analytes simultaneously. The same is true for sol-gel microextraction capillaries with monolithic beds as illustrated in Figures 7-8. The capillary microextraction, results of which are shown on Figure 7, involve a sol-gel ODS monolithic bed (35 mm by 50 micrometers I.D. with one PPM). The extraction time was 30 minutes with desorption at 300°C. The capillary was then placed inside the GC injector port and connected with the GC column wherein the GC column is a sol-gel PDMS column (10 meters by 250 micrometers I.D.) The GC conditions were at 30°C for 5 minutes and the heat was increased at 6°C per minute. As is evident from Figure 8, sol-gel monolithic microextraction capillaries are characterized by sample capacities that are a few orders of magnitude higher than the open tubular counterparts which, in turn, have significantly higher sample capacity than conventional SPME.

**REMARKS**

The above amendments add no new matter, all of the details set forth herein were specifically disclosed in the Figures as originally filed. The modified Figures have removed the verbiage and therefore we have included them herewith.

The application is now in condition for allowance, which allowance is respectfully solicited.

The Commissioner is authorized to charge any fee or credit any overpayment in connection with this communication to our Deposit Account No. 11-1449.

Respectfully submitted,

KOHN & ASSOCIATES

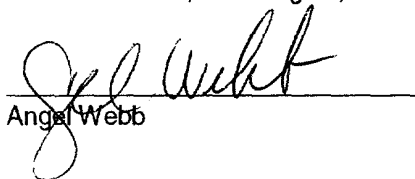


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Date: March 25, 2002

**CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail and addressed to: the Assistant Commissioner for Patents, Washington, D.C. 20231, BOX MISSING PARTS on 3/25/02.



Angel Webb

**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE SPECIFICATION:**

Page 19, Lines 16-25:

Figures 3-6 illustrate the performance of microextraction capillaries with surface-bonded sol-gel coatings. The extraction conditions for the capillaries involve the use of a sol-gel PDMS coated capillary (35 mm by 250 micrometers I.D.) The extraction took a total of 30 minutes. The capillary was placed inside a GC injector port and connected with a GC column, which was a sol-gel PDMS column (10 meters by 250 micrometers I.D.) at 30°C for 5 minutes and then it remained at 6°C per minute thereafter. As can be seen from these figures, sol-gel coated microextraction capillaries can extract both polar and non-polar analytes from aqueous environment. Moreover, these coatings can extract the both types of analytes simultaneously. The same is true for sol-gel microextraction capillaries with monolithic beds as illustrated in Figures 7-8. The capillary microextraction, results of which are shown on Figure 7, involve a sol-gel ODS monolithic bed (35 mm by 50 micrometers I.D. with one PPM). The extraction time was 30 minutes with desorption at 300°C. The capillary was then placed inside the GC injector port and connected with the GC column wherein the GC column is a sol-gel PDMS column (10 meters by 250 micrometers I.D.) The GC conditions were at 30°C for 5 minutes and the heat was increased at 6°C per minute. As is evident from Figure 8, sol-gel monolithic microextraction capillaries are characterized by sample capacities that are a few orders of magnitude higher than the open tubular counterparts which, in turn, have significantly higher sample capacity than conventional SPME.